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A STUDY ON PROFITABILITY ANALYSIS OF SELECTED AUTOMOBILE COMPANIES IN INDIA

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ABSTRACT:

This paper expects to discover the best automobile organization through their gainfulness. We have chosen India's best car organizations. We took some productivity apportions to get results. Profitability is the principal sign of knowing an organization's productivity. Above all financial specialists previously putting resources into the organization initially examine the specific organization's gainfulness of past years. If any organization needs to get by in the market, then just a single way and that is a benefit without benefit any organization cannot make due in the present much-focused market. Be that as it may, on the opposite side of any organization is very gainful so they get remunerated and get financial specialists. There is a standout amongst the most troublesome errand to any business is reliably expanding productivity.

Key Words: Profitability, Business, Automobile.

1. INTRODUCTION:

The automobile industry included structure, advancement, assembling, promoting, and moving engine vehicles. The vehicle industry is otherwise called Automakers. This industry is the world's biggest income generator. The Indian automobile industry has been witnessing significant growth in recent years, driven by various factors such as rising disposable incomes, growing urbanization, and increased demand for vehicles. In this context, analyzing the profitability of specific automobile companies in India has become increasingly important to comprehend the financial well-being of the industry and evaluate its potential prospects.

The objective of this research paper is to perform a thorough investigation of the profitability analysis of certain automobile companies in India. The study will involve analyzing the financial statements and ratios of selected companies, including Tata Motors, Maruti Suzuki India Ltd, Mahindra & Mahindra Ltd, and others. The analysis will focus on key financial ratios such as profitability ratios, liquidity ratios, and solvency ratios; among others. The research paper will also examine the impact of various external factors such as changes in government policies, fluctuations in raw material prices, and competitive pressures on the profitability of the selected companies. Additionally, the paper will offer perceptions of the strategic measures adopted by the companies to enhance their profitability and sustain their growth in the competitive market. The findings of this research paper will be significant for various stakeholders such as investors, policymakers, and industry experts, providing them with a better understanding of the Indian automobile industry's profitability and growth prospects. Moreover, the research paper will contribute to the existing literature on profitability analysis and provide a useful reference for future research in this area.

➲ Automotive Industry in India:-

Chennai is a city in southern India that is known for being a hub for the automobile industry. In fact, it is home to 35-40% of India's total automobile industry. One of the major players in this industry is Suzuki, which has been producing vehicles for both domestic and international markets from India. Their exports have been successful in the international market, demonstrating the quality and competitiveness of Indian-made automobiles. Additionally, Tata Motors, another major player in the Indian automotive industry, showcased their next-generation concept car at the 2015 Geneva motor show. This demonstrates the innovation and forward-thinking mindset of the industry in Chennai and India as a whole. Chennai's automobile industry plays a significant role in the Indian economy and is a testament to the country's growing technological prowess.

➲ **Top Automobile Companies in the World:-**

1. Toyota Motor Corporation
2. Volkswagen Group
3. Daimler AG
4. BMW
5. Honda

➲ **Top Automobile Companies in India:-**

1. Tata Motors Ltd.
2. Mahindra & Mahindra Ltd.
3. Maruti Suzuki India Ltd.
4. Hero Motocrop Ltd.
5. Toyota Motor Corporation.

2. OBJECTIVE OF THE STUDY:

- The key targets of this investigation are:

✓ To show up the benefit of Indian best vehicle organizations.

✓ To analyze the profitability of selected automobile companies in India by examining their financial statements and key financial ratios.

✓ To inspect the benefit of vehicle organizations for example Net Profit Margin, ROE, ROA, and Total Debt/Equity.

✓ To examine the strategic measures adopted by the selected companies to enhance their profitability and sustain their growth in the competitive market.

✓ To compare the profitability of the selected companies with the industry average and identify the best-performing companies in terms of profitability.

✓ To provide insights into the future growth prospects of the Indian automobile industry based on the profitability analysis of the selected companies.

3. LITERATURE REVIEW:

- The study conducted by Samra (2018), the Indian automobile industry is highly competitive, with a few dominant players and several small and medium-sized companies. The study found that the market share of the top five automobile companies in India accounted for over 80% of the total market, highlighting the intense competition in the industry.
- A research paper written by Saha et al. (2019) found that innovation was a key driver of profitability in the Indian automobile industry, particularly in the context of electric vehicles (EVs) and other advanced technologies. The study emphasized the need for companies to invest in research and development to stay competitive and improve profitability in the long term.
- Al-Tarawneh and Al-Sarayreh (2021) wrote a research paper on the Jordanian automobile industry and found that profitability ratios such as return on assets (ROA) and return on equity (ROE) were positively related to firm size and negatively related to financial leverage. Another study by Okwor et al. (2020) on the Nigerian automobile industry found that gross profit margin (GPM) was positively related to sales growth and negatively related to financial leverage.
- A study by Kumar et al. (2021) found that government policies such as the Goods and Services Tax (GST) and the National Electric Mobility Mission Plan (NEMMP) had a significant impact on the profitability of selected automobile companies in India. The study highlighted the need for companies to adapt to changing government policies and regulations to maintain profitability and sustainable growth.

4. COMPANY PROFILE:

For this analysis, we have taken 3 companies and those companies are: -

1. Tata Motors
2. Maruti Suzuki
3. Mahindra & Mahindra Ltd.

I. Tata Motors :

- Type : Public
- Founded : 1945
- Headquarters : Mumbai, Maharashtra, India
- Area served : Worldwide
- Product : Automobiles sports cars, Buses Military vehicles

- Revenue : US $3.4 Billion (2022)
- No. of Employees : 73,608 (2022)
- Subsidiaries : Jaguar, Land Rover, Tata Daewoo
- Website : www.tatamotors.com

II. Maruti Suzuki

- Type : Public
- Founded : 1981; 38 Years ago
- Headquarters : New Delhi, India
- Area served : India
- Product : Automobiles
- Revenue : Rs. 13.62 Billion (2022)
- No. of Employees : 35,089 (2022)
- Website : www.marutisuzuki.com

III. Mahindra & Mahindra Ltd.:

- Type : Public
- Founded : 1945; 74 years ago
- Headquarters : Mumbai, Maharashtra, India.
- Area served : Worldwide
- Product : Automobiles, two-wheelers
- Revenue : Rs. 557.5Billion (2022)
- No. of Employees : 48,968 (2022)
- Parent : Mahindra Group
- Website : www.mahindra.com

5. RESEARCH METHODOLOGY:

a. Time period:

- 3 years from March-2020 to March-2022.

b. Data Collection:

- Secondary data used, information required for the study has been collected from the annual report of selected automobile companies, various websites like the selected company's official website, money control, NSE, and BSE official website.

c. Statistical Tools:

- Mean, Standard Deviation, Coefficient of Variation & ANOVA tests have been used for Data Analysis.

6. *DATA ANALYSIS:*

5.1 Net Profit Margin (%):

- $\mathbf{NetProfitMrgin} = \frac{\mathbf{NetIncome}}{\mathbf{Totalsales}}$

Table: 1 Analysis of Mean, Standard Deviation &Coefficient of variation

YEAR	TATA MOTORS	MARUTI SUZUKI	MAHINDRA & MAHINDRA LTD.
March-20	-16.59	7.47	2.92
March-21	-7.93	6.01	0.59
March-22	-2.94	4.26	8.59
Mean	**-9.82**	**5.24**	**4.03**
SD	**6.01**	**1.34**	**3.56**
CV	**0.61**	**0.26**	**0.88**

Seeing as standard Table 1 has make mean, standard deviation, and coefficient of the variety of chosen car organizations. Maruti Suzuki had the most noteworthy mean esteem (5.24) and Tata Motors had the least esteem when different from different organizations. The standard deviation of Tata Motor has 6.01 which is most elevated among different organizations. What is more, Maruti Suzuki has the most extreme Coefficient esteem with 0.26in contrast with other vehicle organizations.

❖ **Hypothesis:**

H_0: (There is no significant difference in the net profit margin of the selected automobile companies in India.)

H_1: (There is a significant difference in the net profit margin of the selected automobile companies in India.)

Table 2 Analysis of ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	141.68	2	70.84	4.62	0.12	9.55
Within Groups	45.98	3	15.32			
Total	187.66	5				

As the calculated value of F(9.55)is greater than the P-value (0.12)as shown in Table 2 ANOVA, the null hypothesis is discarded. It is, therefore, concluded that is a significant relationship between the selected automobile companies in India.

5.2 Return on Equity (ROE)

$$ROE = \frac{\textbf{Net Income}}{\textbf{Shareholders Equity}}$$

Table: 3 Analysis of Mean, Standard Deviation & Coefficient of variation

YEAR	TATA MOTORS	MARUTI SUZUKI	MAHINDRA & MAHINDRA LTD.
March-20	-39.64	11.66	3.86
March-21	-12.57	8.23	0.77
March-22	-6.97	6.96	12.66
Mean	**-19.06**	**8.28**	**5.43**
SD	**16.20**	**2.40**	**5.13**
CV	**0.85**	**0.29**	**0.95**

Table 3 has discovered Tata Motors had the lowest average annual growth rate (-19.06%), followed by Mahindra & Mahindra Ltd. (5.43%) and Maruti Suzuki (8.28%).Tata Motors also had the highest standard deviation (16.20), indicating that its growth rate was more volatile than that of the other two companies. The coefficient of variation (CV) is a measure of relative variability and it is calculated by dividing the standard deviation by the mean. It shows that Tata Motors had the highest relative variability in its growth rate, while Maruti Suzuki had the lowest.

❖ **Hypothesis:**

H_0: (There is no significant difference in the Return on Equity of the selected automobile companies in India.)

H_1: (There is a significant difference in the Return on Equity of the selected automobile companies in India.)

Table 4 Analysis of ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	382.72	2	191.36	6.5855	0.0799	9.5521
Within Groups	87.173	3	29.058			
Total	469.89	5				

Since the calculated value of F(9.5521) is greater than the P-value (0.0799) as shown in Table 4 ANOVA, the null hypothesis is rejected. It is, therefore, concluded that is a significant relationship between the selected automobile companies in India.

5.3 Return on assets (ROA):

$$ROA = \frac{\textbf{Net Income}}{\textbf{Average Total Assets}}$$

Table: 5 Analysis of Mean, Standard Deviation & Coefficient of variation

YEAR	TATA MOTORS	MARUTI SUZUKI	MAHINDRA & MAHINDRA LTD.
March-20	-11.64	9.03	2.63
March-21	-3.68	6.03	0.45
March-22	-2.17	5.13	7.35
Mean	**-5.50**	**6.73**	**3.48**
SD	**4.47**	**1.05**	**2.79**
CV	**0.81**	**0.16**	**0.80**

As we can see from Table-5, Tata Motors had the lowest mean growth rate (-5.50%), while Mahindra & Mahindra Ltd. had the highest mean growth rate (3.48%). Maruti Suzuki had a mean growth rate of 6.73%. The CV indicates the level of variability of the growth rates relative to the mean, with Mahindra & Mahindra Ltd. having the highest CV (0.80), indicating a higher level of variability in growth rates.

❖ **Hypothesis:**

H_0: (There is no significant difference in the Return on Assets of the selected automobile companies in India.)

H_1: (There is a significant difference in the Return on Assets of the selected automobile companies in India.)

Table 6 Analysis of ANOVA

Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	81.159	2	40.579	4.8023	0.1161	9.5521
Within Groups	25.35	3	8.45			
Total	106.51	5				

Since the calculated value of F(9.5521) is greater than the P-value (9.5521) as shown in Table 6 ANOVA, the null hypothesis is rejected. It is, therefore, concluded that is a significant relationship between the selected automobile companies in India.

5.4 Total Debt/Equity

$$Total\ Debt/Equity = \frac{\text{Total LIabilities}}{\text{Stockholders Equity}}$$

Table: 7 Analysis of Mean, Standard Deviation & Coefficient of variation

YEAR	TATA MOTORS	MARUTI SUZUKI	MAHINDRA & MAHINDRA LTD.
March-20	1.14	0.00	0.09
March-21	1.14	0.01	0.21
March-22	1.17	0.01	0.17
Mean	**1.15**	**0.007**	**0.156**
SD	**0.015**	**0.005**	**0.061**
CV	**0.013**	**0.71**	**0.39**

On account of Table 7 it has discovered the mean, standard deviation, and coefficient of a variety of chosen Automobile organizations. Tata Motor had the most astounding mean esteem (1.15) and Maruti Suzuki had the least esteem when contrasted with different organizations. The standard deviation of Tata Motor has 0.015 which is most noteworthy among different organizations. Also, Maruti Suzuki has the most elevated Coefficient esteem with 0.71in contrast with other car organizations.

❖ **Hypothesis:**

H_0: (There is no significant difference in the Total Debt Equity of the selected automobile companies in India.)

H_1: (There is a significant difference in the Total Debt Equity of the selected automobile companies in India.)

Table 8 Analysis of ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.51	2	0.7582	1819.7	2.36	9.5521
Within Groups	0.00	3	0.0004			
Total	1.51	5				

Since the calculated value of F(9.5521) is greater than the P-value (2.36) as shown in Table 8 ANOVA, the null hypothesis is rejected. It is, therefore, concluded that is a significant relationship between the selected automobile companies in India.

7. FINDINGS:

(a) Net profit Margin of different companies shows that net increasing the period of March-2022 Mahindra & Mahindra has the uppermost percentage of 8.59 and compare to other Automobile companies.

(b) Return on Equity (ROE) reveals that 12.66 percent overall automobile companies Mahindra & Mahindra have the highest in the period of March-2022.

(c) Return on Assets (ROA) shows that high percentage of 9.03 at the end of March-2020 of Maruti Suzuki compare to all other remaining companies.

(d) Total Debt/Equity gives an obvious image of 0.21 percent highest in the period of March-2021of Mahindra& Mahindra.

(e) Taken as a whole study says that Maruti Suzuki performs best in comparison to the other two Automobile companies.

8. SUGGECTIONS

(a) Mahindra & Mahindra has the highest net profit margin and return on equity among all automobile companies. Therefore, the company should continue to focus on profitability and improving shareholder returns.

(b) Maruti Suzuki has the highest return on assets among all companies, indicating that the company is effectively utilizing its assets to generate profits. Therefore, the company should maintain its focus on asset management and continue to optimize its operations.

(c) Mahindra & Mahindra has the highest debt-to-equity ratio among all companies. While some level of debt is necessary for growth, the company should aim to reduce its debt burden to avoid financial instability in the long term.

(d) Overall, the study suggests that Maruti Suzuki performs the best among all automobile companies. Therefore, other companies can learn from Maruti Suzuki's strategies and practices to improve their own performance.

➢ Limitations of the study:

(a) The study only focuses on selected automobile companies in India, which means that the findings may not be applicable to other companies or industries.

(b) The analysis only covers a period of three years.

(c) Due to limited time, only profitability ratios have been analyzed.

(d) The analysis is based solely on secondary data.

(e) The accuracy of the data used in the study is dependent on the quality of financial reports provided by the companies, which may not always be accurate or complete.

9. CONCLUSION

Gainfulness of Automobile organizations in India theater imperative position without benefit there impractical to get by in the business world. After this examination, I have reasoned that Maruti Suzuki beat the other two Companies. To complete that there is a distinction among the mean estimation of Net overall revenue, Return on Equity, Return on Assets, and Total Debt/Equity. So benefit proportions are working by the administration to assess how productively they go up against their business tasks and it is discretionary for the whole car industry to motivate efficacious strides to show signs of improvement in the benefit just as in administration skill of the business.

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